

per face from the two-face trees was 92 per cent as much as from the single-face trees. During the fifth year, however, the yield per face from the double-face trees dropped to 62 per cent of the yield obtained from the trees with only one face, and is now only 53 per cent of the first year's yield. Single faces cutting away one-half of the bark circumference yielded 24 per cent more than single faces cutting only one-quarter of the circumference during the first year, but only 16 per cent more during the fourth season. There was much breakage and dry face in both the wide-face and the double-face groups, whereas the conservatively faced group had very little loss from this cause.

Other variations in naval-stores practice result in variations in yields; but deep chipping, wide chipping, and close cupping, account for a very large proportion of the damage done to young stands of timber. Through the use of conservative chipping as described above, damage may be avoided and yields held to a high figure. The result is greater profits with no extra operating costs and young timber kept in the best possible condition to produce timber products as well as naval stores.

LENTHALL WYMAN.

**N**EGRO Extension Work Much Aided by Use of Movable Schools The use of the movable school in negro extension work was first developed in Alabama in conjunction with the extension activities of Tuskegee Institute. To-day it is an important feature of the extension work among negroes in Alabama. The object of the movable school is to present to the farmers concrete illustrations of a kind that will prove to them that they can do better work, that they can make more produce on a small number of acres of land at less expense, and that at the same time they can beautify their homes, thus dignifying and making country life more attractive and remunerative.

The equipment and personnel of the movable school is moved from place to place in a large specially designed truck, demonstrating in each community visited the latest methods recommended by the extension service. The truck carries a complete stock of farm implements and home conveniences such as the average farmer would be able to purchase or construct and operate. Accompanying it are three trained workers—a man to demonstrate the use of the farm equipment and teach improved methods of farming; a woman to show how to make and use the home conveniences, how to care for poultry, and how to cook, can, and conduct the home on a more healthful and economical basis; and a nurse who gives demonstrations in simple practices of home sanitation and hygiene and in care of the sick. The truck also carries a complete motion-picture outfit and a phonograph. The workers conduct practical and constructive agricultural, home-economics, and health teaching in a most effective manner.

The movable school owing to its novelty and practical aspect apparently is of sufficient interest to cause negro farmers to assemble in large groups at homes strategically selected in the communities visited. It is here that the movable school and its working force go to the bottom of the negro rural problem. The first thing that happens at the home chosen for the school site is that the head of the family usually begins cleaning up around the oft-times miser-

able little shack. The choosing of a particular home as a place for a movable school awakens a latent pride that we all have in a greater or less degree. Aside from the valuable instruction given to that particular family and the other members of the surrounding community during the period of the school, the school causes many people to visit afterward that particular home and note the improvements made. (Fig. 162.)

Wherever the movable school force goes into a community and operates for a week, as is customary, the leading white and colored people of the community usually come out and inspect the type of work being done. Following the holding of such a school, extension work in that section has invariably had more intelligent and liberal local support. In fact, the effort is made by all local negro extension agents to use the movable school demonstrations as the beginning of a definite and systematic method of teaching better farming and more comfortable home surroundings.



FIG. 162.—An improved negro farm home. The movable school has frequently been the first step toward the improvement of the negro farm home

The following statement appearing in the Selma Times Journal gives an excellent view of how these schools are conducted and how they are regarded locally in the sections where they are held:

The agricultural movable school which has been working among the negro farmers of Dallas County for the past four weeks wound up its activities Friday, filling the last engagement 7 miles west of town on the Moore place. At least 10,000 negro farmers, men and women, have attended the sessions and witnessed the demonstrations. Thursday's meeting at Molette's Bend, was one of the most enthusiastic and best attended in the county.

Demonstrations given daily on the program included such practical lines of work as cultivation, controlling insects, care of fruit trees, gardening, repairing, the care of poultry, cooking, and home making. Nineteen sanitary toilets were built in the county, one being placed in each neighborhood as a model. Dr. L. T. Lee, county health officer, addressed several of the larger meetings on elementary health subjects, malaria, hookworm, and communicable diseases. At night educational films were exhibited and many impressive lessons and many scientific discoveries, largely new to many who saw them, were thrown upon the screen.

The school has undertaken to show in many practical ways how to look after matters of cleanliness and air and security from the elements and healthfulness and cooking and other common, everyday fields of household economy that have a very vital bearing on the negro family, and these lessons and demonstrations are bound to be reflected in an improved home life for the negro.

The white landowner, outside of humanitarian considerations, has a very definite stake in the movement to improve the homes of his tenants because he knows it will mean more contented labor and a better environment, increasing healthfulness and freedom from evil propensities. Improved homes will not only help to stabilize the negro farmer and check his migratory proclivities, but they will be a permanent influence in building up his efficiency as a worker and his productiveness on the farm. Better homes will make of him a more valuable economic asset in every way.

In conducting these schools very little lecturing and no pleading is done. The farmers are not only told how to do, but are taught how to do under the supervision of instructors. These simple, practical demonstrations go a long way toward stimulating the



FIG. 163.—Demonstrating how to can fruits and vegetables. This group is typical of the sessions of the movable school and of the follow-up work done by local negro agents

interest of the negro farmer in his home and strengthening his attachment for it, even though he may not own it. The work of these schools has a tendency to arouse in the tenant farmer the desire to own property. They cause the country women to adopt practical methods in thrift and more industrious habits in home making. (Fig. 163.) The program of the movable school also includes athletics for the farm boys and girls and various forms of mild recreation for grown-ups.

The history of the movable school dates back to about 20 years ago. In the country about Tuskegee, which is itself situated on what was at one time a big cotton plantation, many colored people were living, most of them in miserable shacks, eking out a bare existence on their poorly worked farms. Booker T. Washington realized the importance of getting hold of these people in some way and helping them. He began by holding little farmers' meetings. He would

have groups of these people come in to Tuskegee once a month to talk over their problems, and in anticipation of their coming would have simple, attractive exhibits of farm products from the institute's farm put on display with the hope of giving these untrained men a desire to learn how to grow better crops.

Out of this desire on the part of Doctor Washington developed the movable school idea. The first outfit was transported over the county in a large wagon drawn by a pair of mules, known as the "Jesup agricultural wagon." Doctor Washington contended that too few of the people who needed instruction and inspiration got it, for the simple reason that they were too timid to come to such conferences as were being held from time to time at Tuskegee. His idea was that some plan should be devised whereby better methods



FIG. 164.—"The Booker T. Washington agricultural school on wheels" and its field personnel, the latest model of movable school to be used in negro extension work

of farm and home life could be taken to this discouraged and submerged class of people. He said upon one occasion:

I am extremely anxious to try out this new plan for the benefit of the masses of rural people, because it is evident that we must, in a larger measure, take most of the information to their doors if they are ever to get it.

In carrying out this program Doctor Washington insisted that the agent make the largest possible use of the demonstration or illustration, instead of speech making. He said:

Instead of telling the farmer to raise a better pig—raise the pig, and the farmer will never forget it.

From this small beginning the project was so successful that later, when automobiles came into use, a truck known as the "Knapp agricultural truck" was substituted for the "Jesup wagon." This new conveyance enabled the school to cover more territory, carry more equipment, and operate in more counties of the State. In 1923 the scheme was pushed further by money raised from some

30,000 negro farmers and their friends. A modern truck, especially designed for the work, known as "The Booker T. Washington school on wheels," was built and put into service. (Fig. 164.) It is generally felt that the benefits derived more than justify its operation.

The uneducated mass of adult rural negro people in the South will never be able to take their places as citizens, nor will their children be able to take advantage of the improved school facilities until they are made aware that these exist. This knowledge can best be imparted by direct contact in their own environments. The movable school meets this in a unique way.

The negro extension agents spread out over the South are so few in number that it is next to impossible to reach the masses adequately unless some means, in addition to the regular visit system, is devised.

T. M. CAMPBELL.

**NEMAS Sometimes Aid Man in His Fight to Control Insect Pests** It was not foreseen that nemas—nematodes or roundworms—well-known and dreaded parasites of man and higher animals as well as of plants, would prove beneficial. Few realized that the lower animals, among them insects, have so many nemic parasites. It turns out otherwise; moreover, some nemas are extremely destructive to baneful insects. Nemas become man's allies by attacking in various ways the myriads of insects that year after year so seriously damage him in the most varied fields of activity.

Furthermore, there is ever-increasing evidence that free-living soil nemas also aid man in this battle. Many such nemas—Rhabdites, Diplogasters, Cephalobi, etc.—devour insect eggs located in the soil. Entire egg masses of grasshopper eggs are thus destroyed. In other instances larvae, pupae, even adult insects, become the prey of swarms of these seemingly insignificant soil nemas. Cases are known where nemas act as carriers of the germs of insect diseases (bacteria, protozoa, fungi), and in such cases partial credit is due the nemas.

The effects of nemic parasitism on insect hosts vary greatly. Some nemas seem to have hardly any effect, especially when they are present only in small numbers, or when of small size. But others kill the insect, or sterilize it, reduce its fertility, or lengthen the time needed for development, reduce its growth, or weaken it.

The mermithids, long known to laymen as "hair snakes," constitute an outstanding group of relatively large parasitic nemas specially adapted to insects. Some mermithids may reach a length of 30 inches. Entering the insect in a very young, microscopic stage, or being swallowed in the egg stage, the mermithid matures within a few weeks, then leaves the host in order to enter the soil or other hiding place for copulation and egg production. Mermithids are so large that even a single specimen, on vacating, usually leaves the host insect in such an exhausted state that it soon dies. There are 200 to 300 species of mermithids known. They attack many different orders and species of insects, and some of these insects are notable pests, such as grasshoppers and earwigs, mosquitoes and gnats, May beetles, ants and wasps, the gipsy moth, the codling moth, cutworms, etc.